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ABSTRACT

This study uses data from the 1985 Survey of Public Participation in the Arts (SPPA) to explore the composition of the audience for art museums and art galleries in the United States. Organized into four parts, part 1 reports that when asked if they had visited an art museum or art gallery in the 12 months preceding their 1985 SPPA interview, 22 percent of the adult population said that they had. The report goes on to present art museum participation rates across a variety of demographic variables--income, education, age, gender, race, geographic distribution, and occupation. This section also compares the 1985 SPPA participation rates with those of the Americans and the Arts Studies, and with participation rates from Great Britain, France, Sweden, and Quebec. A statistical model designed to predict the probability of attendance based on demographic factors also is developed in part 1, but this model's low predictive ability leads to the conclusion that other variables need to be examined. Part 2 of the report focuses on three SPPA socialization questions that are most likely to be linked to attendance at art museums: whether or not, and at what ages, the respondent had ever taken lessons in the visual arts; whether or not, and at what ages, the respondent had taken art appreciation classes; and whether or not, and the frequency with which, parents had taken the respondent to museums. An analysis of these questions reveals that all three of these factors show a strong relationship with increased attendance. Part 3 of the report examines unsatisfied demand and barriers to attendance. Part 4 presents a profile of the museum audience and examines how the demographic characteristics of the SPPA respondents are distributed among the museum audience and how this audience profile compares to the profile of the general population. An appendix that presents the mathematical results from the three logit analyses (a variation of regression analysis) that were conducted with the SPPA museum attendance data also is included. (DB)

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J. Mark Davidson Schuster

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Research Division Report #23
National Endowment for the Arts

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J. Mark Davidson Schuster

Research Division Report # 23
National Endowment for the Arts

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Introduction: Who are the Visitors to Art Museums?

Until the mid-nineteenth century most museums were founded around private collections, and access was restricted to an audience selected by the collector, though few went to such great lengths as Sir Ashton Lever in 1773:

> This is to inform the Publick that being tired out with the insolence of the common People, who I have hitherto indulged with a sight of my museum (at Alkrington), I am now come to the resolution of refusing admittance to the lower class except they come provided with a ticket from some Gentleman or Lady of my acquaintance. And I hereby authorize every friend of mine to give a ticket to any orderly Man to bring in eleven Persons, besides himself, whose behavior he must be answerable for, according to the directions he will receive before they are admitted. They will not be admitted during the time of Gentlemen and Ladies being in the Museum. If it happens to be inconvenient when they bring their ticket, they must submit to go back and come some other day, admittance in the morning *only* from eight o'clock till twelve.[1]

In the late eighteenth century, people who wished to visit the British Museum had to present their credentials at the office and await word, sometimes for months, as to whether they would receive an admission ticket.[2] And it was not until 1960 that the Barnes Foundation in Philadelphia was forced, in exchange for its status as a tax-free institution, to open its doors to the general public, though admissions were still limited to 400 per week.[3]

In the nineteenth century, particularly in the United States, the distinction between private and public museums began to fade. The motivation for establishing a museum became not so much the need to house a collection as the desire to provide an opportunity for the general edification of the public.

In the last decade, with the rise of both public and private nonprofit funding mechanisms that take a large part of their mandate to be increasing the breadth of exposure of Americans to the arts, overall attendance figures have become increasingly important for two reasons. First, museums are finding that carefully documenting audience size helps them to make a more persuasive case to government and private funders, whether or not they actually consider broadening the range of their audience as one of their primary goals. Second, museums need the revenue that comes from increased attendance.

At the same time, more and more museums are becoming concerned with the fine-grained detail of who attends art museums and who does not. For these museums an understanding of their audience is a critical point of departure for a wide variety of management decisions. Once a museum has a profile of its audience, it can compare that profile with other demographic profiles to help answer a number of interesting policy questions. Some of the databases a museum might wish to use, along with the policy questions that might be answered by such comparisons, are summarized on the next page. Accordingly, this study constructs a series of profiles of the American audience for art museums and galleries, and outlines a number of the methodological issues that are involved in constructing such profiles.

There is a longer tradition of audience studies among art museums than perhaps among any other type of arts institution. Evidence from a number of museum audience studies, along with studies from the performing arts, was brought together for the first time in 1977 by DiMaggio, Useem and Brown.[4] Carefully aggregating the results of these diverse studies, DiMaggio *et al.* summarized the demographic composition of the public for the arts in the United States:

- The audience for the arts was more highly educated, was of higher occupational status, and had a higher income than the population as a whole.
- Women were slightly overrepresented in the arts audience.
- The median age of the arts audience was close to the median age of the population at large but varied widely from audience to audience.
- Minorities were present in proportions smaller than their share of relevant metropolitan populations.

And, with respect to the public for museums:

- Museum visitor populations were somewhat more representative of the American public than were the performing arts audiences surveyed.
- The museum surveys found smaller proportions of professionals and the well educated, and lower median incomes than did studies of performing arts audiences.
- The art museum visitor population was better educated, wealthier, older, and composed of more professionals than visitors to history, science, or other museums.[5]

Audience Profiles as Data Bases for Answering Policy Questions

Audience Profiles	Policy Questions
The profile of the overall audience for art museums as reflected in SPPA '85 or in similar studies.	What portions of the population is the museum serving as compared to museums on average?
The profile of the overall population or of the population in the museum's local area.	What segments of the population are underrepresented in the museum's audience?
The profile of the museum's target population.	Is the museum serving the segments of the population to which it has targeted its activities?
The staff's impression of what the museum's audience profile is currently.	How well does the museum staff understand the composition of the current audience? Is the programming promoted by the staff meeting the needs of the actual audience?
The audience profile of other similar museums.	How does the museum's experience compare to that of sister museums? Is the museum more successful or less successful than other museums at attracting particular groups to the museum?
The audience profile of other nearby "attractions."	What are the other local educational and leisure opportunities that compete for the audience? To what extent is the museum attracting an audience that is different from the audience attracted by others? Is the museum competing for the same audience?
Changes in the museum's audience profile over time.	How has the audience profile changed? Has it changed because of things that the museum has done differently or because of external factors? Has it changed in ways in which the museum would like its audience to change?

These results were not terribly surprising; they reinforced widely held views on the composition of the arts audience. Yet, because these results are based on a wide variety of studies that are not inherently comparable, they are, at best, only suggestive of the audience profile of art museums. What might an extensive, careful, cross-sectional survey of the entire American adult population reveal about visitors to art museums?

In this study, the Survey of Public Participation in the Arts (SPPA) is used to explore the composition of the audience for art museums and art galleries in the United States. Sponsored by the National Endowment for the Arts and conducted by the U.S. Bureau of the Census in collaboration with the University of Maryland, the SPPA is the first major attempt to collect coherent data on arts attendance and participation across the entire adult population of the United States. The SPPA was first undertaken in 1982 and repeated in 1985. This work relies on data from the 1985 SPPA, in which a probability sample of the American adult population was taken and 13,675 adults were interviewed between January and June 1985. Because of the scale of this survey and the care with which it was taken, its data present an important opportunity to explore a variety of interesting questions concerning the participation of American adults in artistic activities.

Part I: The Demographics of Participation Rates

When asked if they had visited an art museum or art gallery in the twelve months preceeding their 1985 SPPA interview, 22 percent of the adult American population said that they had. *Two out of every nine adults.*[†]

This overall participation rate is a convenient base of comparison for determining which subgroups of the population are more likely to be museumgoers and which are less likely. Table 1 summarizes participation rates across a variety of demographic variables, both in raw terms and as percentages. The results for these variables are discussed below.

[†]Care must be taken in interpreting these numbers. First, the key attendance question grouped art museums and art galleries together, but there is considerable variation in the use of the phrase "art gallery." In some places it refers only to shops selling art works, in others to "art museums." If everyone who shopped in a gallery also attended a museum in the preceeding year, then there is likely to be little bias; if not, there is a bias whose aggregate effect is unknown. Second, the data are based on recollections of activities over the previous twelve months, recollections that might not be entirely accurate. While these caveats may limit one's confidence in the absolute numbers, they do not necessarily affect relative demographic comparisons.

Presenting the findings as the raw number per 1,000 adults is necessary because of the fundamental difference between the size of a percentage and the size of the population base to which the percentage is to be applied. A small percentage applied to a large base can still represent a large number of people. For example, the SPPA data show that while 58 percent of attenders would like to attend art museums more often, only 23 percent of non-attenders would like to attend. Yet, out of every 1,000 adults, 307 would like to attend more often and 179 of them —well over half—are currently non-attenders.[6]

Income: As income rises the participation rate rises, from 11 percent of those with incomes between $5,000 and $10,000 to 45 percent of those with incomes greater than $50,000. Thus, differences in income levels are particularly helpful in explaining the relative likelihood of attendance. Comparing these figures with those per 1,000 adults, however, reveals that although the participation rate is highest in the highest income group, more than a third of the art museum audience actually comes from the $25,000–$49,999 income group, the largest income group in the adult population.

There is one exception to the general increase in the probability of attendance with increases in income: a decrease from 16 percent to 11 percent between the lowest and the next-lowest income categories. An important component of this seeming anomaly is the fact that adults who are currently students are disproportionately in the lowest income group, yet their attendance pattern differs markedly from the non-students in the same income group. However, the overall pattern is quite clear: Adults who are currently students are much more likely to be attenders than are other adults.

Education: Educational level is clearly correlated with participation rate. The rate rises from a low of 4 percent of adults with a grade school education to a high of 55 percent of adults with some graduate school education, a difference of 51 percentage points. This difference makes education the most important predictive variable in this list of demographic variables. (For income, the corresponding difference is 29 percentage points.) However, the raw figures in Table 1 show that well over half the audience completed less than a full college education. Again, this is because of the relative size of these groups in the adult population.

To understand the full effect of education on participation rates, separating students from non-students is once again important. While understandably there are very few current adult students in the first three education categories (grade school, some high school, and high school graduate), there are a number who are enrolled in college, and their participation rates are

Table 1
Attendance at Art Museums and Art Galleries, 1985

Question: During the last 12 months, did you visit an art gallery or art museum?

			Per 1,000 Adults	
		Participation Rate	Number Attending	Number in Category
Overall				
Of all adults		22%	219	1,000
Income				
Of adults whose family income was	$4,999 or less	16%	13	82
	$5,000–$9,999	11%	14	126
	$10,000–$14,999	15%	21	143
	$15,000–$24,999	19%	47	247
	$25,000–$49,999	28%	85	308
	$50,000 or more	45%	42	94
			222	1,000
Education				
Of adults whose highest education level was	Grade School	4%	4	110
	Some High School	71%	8	118
	High School Grad	14%	53	376
	Some College	29%	60	203
	Four-year College Grad	45%	50	110
	Graduate School	55%	45	82
			220	1,000
Age				
Adults whose age was	18–24 years	22%	35	161
	25–34 years	25%	61	238
	35–44 years	26%	48	182
	45–54 years	23%	30	132
	55–64 years	18%	24	130
	65–74 years	16%	16	97
	75+ years	10%	6	59
			220	1,000
Gender				
Of adult	Female	23%	121	528
	Male	21%	99	472
			220	1,000
Race				
Of adults	Black	11%	12	108
	White	23%	203	873
	Other	26%	5	19
			220	1,000
Urbanization				
Adults who lived in	SMSA† and in Central City	25%	69	271
	SMSA but not Central City	26%	107	413
	Area outside an SMSA	14%	44	316
			220	1,000

Table 1 (Continued)

			Per 1,000 Adults	
		Participation Rate	Number Attending	Number in Category
Region				
Of adults who lived in the	Northeast	20%	42	209
	Midwest	21%	53	252
	South	19%	64	344
	West	31%	60	195
			219	1,000
Subregion				
Of adults who lived in	New England	24%	13	54
	Mid Atlantic	19%	29	155
	East Northcentral	20%	37	182
	West Northcentral	23%	16	70
	South Atlantic	19%	35	180
	East Southcentral	11%	7	66
	West Southcentral	23%	23	98
	Mountain	28%	13	46
	Pacific	32%	47	149
			220	1,000
Selected States‡				
Of adults who lived in	California	32%	36	114
	Florida	20%	9	46
	Georgia	17%	5	29
	Illinois	23%	11	48
	Indiana	23%	5	22
	Massachusetts	25%	6	24
	Michigan	21%	9	43
	New Jersey	16%	5	31
	New York	21%	16	75
	Ohio	14%	7	50
	Pennsylvania	14%	7	49
	Texas	26%	17	64
	Virginia	30%	8	27
	North Carolina	13%	4	32
Selected Occupations				
Of adults whose occupation was classified	Professional	49%	44	89
	Managerial	37%	32	85
	Sales/Clerical	27%	64	240
	Craftsman	14%	13	91
	Operatives	10%	7	73
	Laborers	10%	8	80
	Service Workers	16%	17	108

Source: "Survey of Public Participation in the Arts," 1985.

Notes: The number who attended per 1,000 adults varies slightly across variables because of missing values and rounding errors.

†SMSA stands for Standard Metropolitan Statistical Area.

‡These are the only states for which the U.S. Bureau of the Census has prepared separate tabulations.

quite high: 38 percent for students with some college education, 37 percent for college graduates, and a very high 67 percent for students in graduate school. (This last participation rate is one of the highest found in this analysis. Yet, with the introduction of additional "third" variables, it is possible that this participation rate would become even higher.) As with income, once the students are separated out of the adult population, the participation rates by education for non-students differ very little from the overall distribution for all adults.

Age: Participation rates are roughly constant (in the low to mid-twenty percent range) until age 55 when they begin to tail off. The highest participation rate, 27 percent, occurs in the 35–44 year bracket, perhaps reflecting increased attendance among families with children.

Gender: Women are slightly more likely to attend than are men. Coupled with the fact that there are more women in the adult population than men, this means that among visitors to art museums, women outnumber men by a ratio of 6 to 5.

Race: Whites are roughly twice as likely to have visited an art museum in the previous year as African-Americans. Much of this difference may be attributed to differences in education level or income level. On average, other racial and ethnic groups have a participation rate that is approximately the same as that of whites.

Geographic Distribution: Adults who lived in a Standard Metropolitan Statistical Area (SMSA), a U.S. Census Bureau designation used here as a rough indicator of urbanization, had slightly higher than average participation rates whether or not they actually lived in the SMSA's central city (e.g., Boston as opposed to one of its suburbs). Adults who lived outside an SMSA had a participation rate that was only two-thirds of the average. Roughly half of the audience was made up of individuals who lived in an SMSA but not in the central city.

An analysis of the population by region of the country shows interesting variations.[7] While the participation rates for the Northeast, Midwest and South are all roughly 20 percent, the rate in the West is 31 percent. An analysis by subregion shows that New England's participation rate is somewhat higher than average, but that the Mountain and Pacific states have considerably higher participation rates.

High participation rates in the West are centered in the large metropolitan

areas. According to special Census Bureau tabulations for selected metropolitan areas, the highest metropolitan-area participation rates are all in the western states: 41 percent in the San Francisco Bay area, 28 percent in the Los Angeles area, 38 percent in other central cities in SMSAs in the West, and 33 percent outside of the central cities in the same SMSAs. In addition, Boston has a participation rate of 26 percent, Baltimore/Washington, D.C. 26 percent, Chicago 27 percent, and cities in Texas 31 percent.

The available data for selected states reflect the regional figures in certain cases a 32 percent participation rate in California and 27 percent in Massachusetts, for example. But the data also point out some less expected results in light of the regional aggregates: 26 percent in Texas and 31 percent in Virginia. One wonders if the high participation rate for Virginia is a function of the easy accessibility of the national museums in Washington, D.C., to the bulk of Virginia's urban population.

This, in turn, suggests an important possible explanation for the differences in participation rates for each of the geographic variables. Is the variation in participation better explained by the geographic distribution of museums than by geographic differences in the population? In other words, to what extent is attendance a function of the supply of museums rather than of the demand for museums inherent in the demographics of particular populations?

Occupation: Participation rates across this variable range from a low of 9 percent for operatives (machine operators) to a high of 49 percent for professionals. Both the managerial and professional categories show participation rates well above the overall average. But because both categories also have higher than average incomes and education levels, looking at occupation by itself may mask the effect of these other important variables.

Up to this point, this analysis of the 1985 SPPA data has been a relatively straightforward one, based on the demographic variables that are commonly cited as important in analyzing audience participation in the arts and across which significant differences in participation rates are, in fact, observed. But this group of variables has a very interesting common property: they are all variables over which neither the individual museum nor any arts funding agency has any influence (except, perhaps, by actually moving the museum).

It is difficult, for example, to imagine the museum that would be in a position to increase the level of formal education or income of its potential audience in order to increase the local participation rate. We are left with the impression that potential visitors are prisoners of their own demographics or

that museums are prisoners of the demographics of their potential local audiences. While this may in a sense be true in the aggregate, it does not help the individual decisions made by potential visitors in choosing whether or not to attend a museum.

To be sure, a demographic analysis will help to document that the audience is much larger than had been hoped or smaller than had been feared, or that particular segments of the population are not being reached as much as the museum might like. But its usefulness in suggesting how a museum can go about changing its audience demographics is limited. It can indicate if the overall demographics of the audience have changed over time, but attributing those changes to specific interventions is difficult. Change in audience composition is a slow, resistant process. A demographic analysis of the audience is descriptive rather than prescriptive, and one should resist the temptation to conclude that one knows more than one actually does about audience behavior and motivations when armed with these demographic results.

Comparing Participation Rates: The *Americans and the Arts* Studies

In 1973, 1975, 1980, 1984, and 1987 the National Research Center of the Arts, an affiliate of Louis Harris and Associates, conducted the *Americans and the Arts* studies.[8] These studies have received much visibility within the arts advocacy community, particularly for their high estimates of attendance at, and support for, artistic activities. How do their results compare with those from the SPPA?

Table 2 presents a comparison of the key participation rates calculated in the 1985 SPPA and the 1984 Harris study. Harris reports an overall art museum participation rate of 58 percent, just slightly more than five adults in nine, which is two and a half times the 1985 SPPA participation rate. Art museums and the theatre are the two sectors that show the greatest discrepancy between studies: 36 percentage points in the case of museums (a 58 percent participation rate in Harris versus 22 percent in the SPPA) and 37 percentage points for theatre (a 60 percent participation rate in Harris versus 23 percent in the SPPA). Moreover, when the two studies' participation rates are compared for each separate educational level, the discrepancies are very large at each level (27% v. 4% at the lowest reported levels). What accounts for these large discrepancies?

John P. Robinson and his colleagues have carefully compared SPPA

results with the Harris figures.[9] They point to several factors that help to explain part of the difference:

- The placement and wording of the questions, in the Harris survey in particular, may tempt respondents to give artificially high responses so they will not appear to be "uncultured."
- In presenting aggregate figures, the Harris underweights the lowest educational groups in proportion to their true weight in the population.
- Harris' use of telephone interviews with quota sampling and a lower response rate than the Bureau of the Census achieved in SPPA combine to suggest that there may have been selection biases that led to respondents who were simply more likely to be attenders than a random cross-section of the population.

From a technical standpoint the SPPA studies are considerably more defensible, and, therefore, their results are to be taken more seriously. Moreover, it would be a mistake to focus too much on technique and lose sight of common sense. Before the *Americans and the Arts* series began, the art museum world dared not hope that it would one day discover it was already reaching a substantial proportion of the adult population each year. When the Harris studies suggested this possibility, the results were first treated with gratified astonishment and then were gradually incorporated into the established canon of arts policy "knowledge." The SPPA data indicate that the initial skepticism had a lot more truth in it than arts advocates eventually came to believe. The 58-percent participation rate is simply too high.

Comparing Participation Rates: An International Perspective

Americans seem to have the view that attendance at artistic events is much more ingrained in the culture of other countries, particularly in Western Europe, than it is in the United States. How do American art museum participation rates compare to those in other countries?

Although cross-national comparison in arts policy is plagued by the wide variation in definitions and approaches across both countries and cultures,[10] the variation in what is considered to be an art museum or an art gallery is much smaller than similar variations might be within other artistic sectors. Even so, important differences in both surveying procedures and definitions of key demographic categories must be taken into account.

Table 3 compares participation rates from audience studies in Great Britain, France, Sweden, and the Canadian province of Quebec to the results

Table 2
A Comparison of Participation Rates: 1985 SPPA and 1984 Harris

1985 SPPA		1984 Harris	
Question: During the last 12 months did you visit an art gallery or an art museum?		*Question: How many times, if any, did you visit art museums that exhibit paintings, drawings, sculpture, etc., during the past 12 months?*	
Overall	22%	58%	**Overall**
Income			**Income**
$4,999 or less	16%	43%	$7,500 or less
$5,000–$9,999	11%	53%	$7,501–$15,000
$10,000–$14,999	15%	58%	$15,001–$25,000
$15,000–$24,999	19%	62%	$25,001–$35,000
$25,000–$49,999	28%	67%	$35,001–$50,000
$50,000 or more	45%	76%	$50,001 or more
Education			**Education**
Grade School	4%	27%	Eighth Grade
Some High School	11%		
High School Grad	14%	46%	High School Grad
Some College	29%	70%	Some College
Four-year College Grad	45%	78%	College Grad
Graduate School	55%		
Age			**Age**
18–24 years	22%	66%	18–29 years
25–34 years	25%		
35–44 years	27%	62%	30–49 years
45–54 years	23%		
55–64 years	18%	53%	50–64 years
65–74 years	16%	46%	65+ years
75+ years	10%		
Gender			**Gender**
Female	23%	57%	Female
Male	21%	60%	Male
Race			**Race**
Black	11%	50%	Black
White	23%	59%	White
Other	25%	64%	Hispanic

Table 2 (Continued)

Urbanization		Size of Place	
SMSA Central City	25%	66%	Cities
SMSA not Central City	26%	58%	Suburbs
Outside SMSA	14%	49%	Town/Rural

Sources: "Survey of Public Participation in the Arts," 1985. National Research Center of the Arts, *Americans and the Arts*, 1984.

from the 1985 SPPA.[11] This comparison shows very similar overall participation rates among these countries, with the exception of Sweden where participation is slightly higher: in the United States, 22 percent for art museums and art galleries; in Great Britain, 29 percent for all museums and 19 percent for art exhibitions; in France, 30 percent for all museums (net of historic monuments) and 21 percent for temporary art exhibitions; and in Quebec, 23 percent for art museums and 17 percent for other museums. In Sweden, on the other hand, the participation rate is 31 percent. All of these participation rates were measured with respect to attendance in the preceeding twelve months. Where the participation rate is somewhat higher, it appears that the difference can be attributed to the broader range of museums included in the surveys.

The similarities across these studies are not limited to overall participation rates. With the exception of some higher participation rates in the Swedish study, when the participation rates are disaggregated over various demographic variables they remain remarkably similar across the other studies. This is particularly true when differences as to which museums are being considered are taken into account.

In many respects the French study most resembles the SPPA surveys; it was commissioned to document the participation of the French population in a wide variety of leisure and artistic activities. The British survey is more akin to the Harris surveys, concerning itself with attitudes towards public funding of the arts and correlating those opinions with participation rates and demographic factors. (Because of this emphasis, the British study includes several variables that are not available in other studies indicating, perhaps, the relative politicization of arts policy questions in Great Britain: trade union membership, voting intention by political party, support for or opposition to public funding of various art forms, and whether or not the respondent had heard of the Arts Council of Great Britain.)[12]

Table 3-A
A Cross-National Comparison of Participation Rates: The United States and Great Britain

United States — 1985 SPPA

Question: During the last 12 months did you visit an art gallery or an art museum?

Great Britain — 1981 MORI

Question: On another subject, which of these have you personally been to in the past 12 months? museum?

	Participation Rate	Museum Participation Rate	Art Exhibition Participation Rate	
Overall	22%	29%	19%	**Overall**
Age				**Age**
18–24 years	22%	21%	17%	18–24 years
25–34 years	25%	34%	17%	25–34 years
35–44 years	27%	35%	21%	35–49 years
45–54 years	23%			
55–64 years	18%	29%	20%	50–64 years
65–74 years	16%	20%	18%	65+ years
75+ years	10%			
Gender				**Gender**
Female	23%	27%	18%	Female
Male	21%	31%	20%	Male
Occupation				**Class**
Professional	49%	44%	37%	Upper
Middle Managerial	37%	39%	27%	Lower Middle
Sales/Clerical	27%	27%	15%	Skilled Manual
Craftsman	14%	19%	9%	Semiskilled and
Operatives	9%			Unskilled Manual
Laborers	10%			
Service Workers	16%			
Subregion				**Region**
New England	25%	16%	12%	Scotland
Mid Atlantic	19%	27%	14%	North
East Northcentral	20%	30%	19%	Wales/Midlands
West Northcentral	22%	32%	20%	South
South Atlantic	19%	34%	28%	Southeast
East Southcentral	10%			
West Southcentral	23%			
Mountain	28%			
Pacific	32%			

Sources: "Survey of Public Participation in the Arts," 1985. Market and Opinion Research International survey (quota sample of 973 adults age 18+ interviewed at 51 points throughout Great Britain. Class is of household head.) conducted for BBC "Panorama," 26 November 1981.

Table 3-B
A Cross-National Comparison of Participation Rates: France

France *Pratiques Culturelles des Français* '81

Questions:	*1) Since December '80, have you visited a museum?*	*2) Since December '80 have you visited a temporary exhibition of painting or sculpture*
	Museum Participation Rate	**Exhibition Participation Rate**
Overall	30%	21%
Education		
No Diploma	14%	7%
Elementary School Grad	21%	10%
Certificate	34%	25%
Bachelor's Degree or more	57%	49%
Age		
15–19 years	40%	26%
20–24 years	38%	27%
25–39 years	34%	29%
40–59 years	28%	18%
60–69 years	27%	15%
70+ years	14%	9%
Gender		
Female	30%	22%
Male	30%	21%
Socio-Professional Category		
Agriculture	17%	8%
Small Merchant/Artisan	32%	26%
Wholesale and Industrial	49%	33%
Professional and Managerial	61%	53%
Middle Class	53%	40%
Clerical	32%	28%
Foreman	24%	18%
Laborer or Service Worker	20%	13%
Urbanization		
Rural	20%	13%
Less than 20,000 residents	26%	19%
20,000–100,000 residents	28%	21%
More than 100,000 residents	33%	23%
Paris	56%	50%
Paris Region	47%	36%

Source: Pratiques Culturelles des Français, survey (stratified quota sample of 3,984 individuals age 15 or over) conducted by ARCmc for the French Ministry of Culture (Paris: Dalloz, 1982).

Table 3-C
A Cross-National Comparison of Participation Rates: Sweden

Sweden *Kulturstatistik*

Percentage of the population age 16–74 years that visited a museum in the previous 12 months (1982/83)

	Art Exhibitions and Art Galleries	Museums and Exhibitions (Other than Art)
	Participation Rate	Participation Rate
Overall	31%	45%
Education		
Pre-Secondary	20%	32%
Secondary	31%	46%
Post-Secondary	61%	74%
Age		
16–24 years	25%	51%
25–44 years	32%	51%
45–64 years	35%	41%
65–74 years	29%	29%
Gender		
Female	34%	45%
Male	28%	45%
Socio-Economic Group		
All Workers	19%	34%
Unskilled and Semi-Skilled Workers	19%	33%
Skilled Workers	20%	38%
All Salaried Employees	48%	59%
Junior Salaried Employees	38%	47%
Intermediate Level Salaried Employees	49%	62%
Senior Salaried Employees	65%	75%
All Entrepreneurs	29%	37%
Entrepreneurs Without Employees	32%	41%
Entrepreneurs With Employees	40%	47%
Farmers	17%	27%
Regions		
Stockholm	41%	56%
Göteborg and Malmo	35%	53%
Other Large Cities and Towns	30%	44%
Other Southern and Central Sweden	26%	37%
Northern Densely Populated Areas	31%	45%
Northern Sparsely Populated Areas	21%	30%

Source: Statistics Sweden, "Level of Living Survey 1982/83," as reported in Official Statistics of Sweden, *Cultural Statistics: Activities, Economy and Cultural Habits 1980–1984* (Stockholm: Statistics Sweden, 1987), p. 340.

Table 3-D
A Cross-National Comparison of Participation Rates: Quebec

Quebec CROP '83

Percentage of the population having visited a museum at least once in 1983

	Art Museum Participation Rate	Other Museums Participation Rate
Overall	23%	17%
Education		
0–7 years	10%	7%
8–11 years	17%	14%
12–15 years	28%	20%
16+ years	48%	29%
Income (Canadian $)		
$10,000 or less	13%	6%
$10,000–$19,999	24%	16%
$20,000–$29,999	25%	17%
$30,000 or more	34%	25%
Age		
15–17 years	26%	36%
18–24 years	23%	18%
25–34 years	27%	16%
35–44 years	29%	22%
45–54 years	22%	15%
55+ years	18%	10%
Gender		
Female	24%	16%
Male	23%	18%

Source: Ministère des Affaires Culturelles du Québec, *Chiffres a L'Appui*, Bulletin du Service de la Recherche et de la Planification, Vol. 2, No. 2, May 1984, summary of a public opinion poll (sample of 2,316 individuals age 15 or over) conducted by the Centre de Recherche sur l'Opinion Publique (CROP) in 1983.

Both the British and the French surveys separated attendance at "art exhibitions" or "temporary exhibitions of painting or sculpture" from more general attendance at museums. In order to understand the stable, core audience for art museums, it would be necessary to identify and separate out those individuals who only attended because of a particular exhibition, perhaps a well-advertised "blockbuster" show, and do not normally consider themselves part of the museum's audience. However, the 1985 SPPA data do not allow this distinction to be made.

While far from conclusive, all of these reports taken together suggest that, at least in Western countries, museums may well be serving similar segments of their national populations. Art galleries, art exhibitions, and art museums relate more readily to certain individuals than to others and, indeed, are the institutional creation of certain social groups. In large part this receptivity seems to be a function of the same demographic factors. The extensive Swedish social welfare state, greater citizen involvement in communal activity, and a higher educational level may well explain the higher participation rates in Sweden.

This comparison does not speak, however, to the relative frequency of attendance. It is certainly possible that while the cross-section of the population being served is quite similar across countries, the frequency of attendance might be rather different in places where "museum going" has become more a part of daily life. But the limited data we have on this question suggest that frequency of attendance is not higher in these other countries. Against the SPPA mean of 3.42 visits per visitor to art museums, for example, the French study reports a mean of 3.1[13] and the Quebec study a mean of 2.11.[14] Neither the British nor the Swedish studies report any data on frequency of attendance.

Participation Rates: Controlling for "Third" Variables

In order to find better answers to questions about the effect of certain demographic variables (e.g., are the high participation rates for upper-income groups a function of that income level or of the fact that upper-income individuals also tend to be more highly educated?), it is necessary to control for and separate out the effects of other variables that might confound the results. This section discusses the findings of two different methods of controlling for these other variables: multiple classification analysis and logit analysis.

Multiple Classification Analysis

Multiple classification analysis (MCA) is a mathematical method for calculating the net value of variables whose behavior one is trying to explain—in this case attendance—for each value of possible key explanatory variables—such as various levels of income or education. MCA controls for the contribution of other explanatory variables—such as race or marital status—by averaging out their effects.[15] Conventionally, the variable whose behavior one is trying to explain is called the "dependent" variable and the various explanatory variables are called the "independent" variables.

In studying museum attendance patterns, MCA estimates the addtional effect of each independent variable on the participation rate. MCA then adds (or subtracts) this additional effect to (from) the participation rate to create an "adjusted" participation rate. This adjusted rate reflects, as much as is mathematically possible, the pure effect of each independent variable on the participation rate. In this way, for example, differences in the participation rate that result from differences in income alone can be isolated.

Table 4 summarizes the results of a multiple classification analysis of participation rates that considered five primary independent variables—income, education, age, gender, and region—and four other independent variables—marital status, number of children, race, and number of hours worked per week. The first column reports the participation rates for the main independent variables when each is considered by itself (prior to MCA); the second column reports the adjusted participation rate for each variable once it has been controlled for the other variables through MCA.

Income: When viewed in isolation, income appeared to be a useful predictor of museum attendance: participation rates ranged from 11 percent to 45 percent. But when one controls for the influence of the other variables, the adjusted participation rate is roughly constant—approximately 20 percent—over the lowest five income groups, and finally jumps to 32 percent in the highest income group. This important result indicates that it is too simple to say that income is an important predictor of museum attendance; it is highly correlated with other variables that are better predictors, particularly education.

Education: After adjustment, these participation rates are slightly closer together than before, ranging from 7 percent for those with a grade school education to 54 percent for those with a graduate school education. But the remaining 47 percentage point spread indicates that controlling for other variables hardly diminishes education's ability to predict attendance. This result reinforces the importance of education as the key demographic predictor of attendance.

Table 4
Comparison of Unadjusted and Adjusted Participation Rates, 1985

Question: *During the last 12 months did you visit an art gallery or an art museum?*

	Participation Rate	MCA Adjusted* Participation Rate
Overall	22%	22%
Income		
$4,999 or less	16%	22%
$5,000–$9,999	11%	19%
$10,000–$14,999	15%	19%
$15,000–$24,999	19%	20%
$25,000–$49,999	28%	24%
$50,000 or more	45%	32%
Education		
Grade School	4%	7%
Some High School	8%**	9%
High School Grad	14%	15%
Some College	29%	28%
Four-year College Grad	45%	43%
Graduate School	55%	54%
Age		
18–24 years	22%	23%
25–34 years	26%**	25%
35–44 years	27%	24%
45–54 years	23%	21%
55–64 years	18%	20%
65–74 years	17%**	21%
75+ years	10%	14%
Gender		
Female	23%	24%
Male	21%	20%
Region		
Northeast	21%**	21%
Midwest	21%	21%
South	19%	21%
West	31%	28%

Source: "Survey of Public Participation in the Arts," 1985.

Notes: * In this example, multiple classification analysis (MCA) is used to control for five main independent variables—income, education, age, gender, and region—and four other independent variables—marital status, number of children, race, and number of hours worked per week. Each adjusted participation rate separates the effect of one variable by controlling for the effect of the others.

** These rates differ slightly from those in Table 1 because missing values necessitated dropping more cases from the analysis.

Age: After adjustment, the effect of age on attendance nearly disappears. The adjusted participation rates are fairly constant, from 20 to 25 percent, and they do not fall off until more than 75 years of age (14 percent).

Gender: The adjusted ratio of female to male participation rates is 24:20, whereas it was 23:21 before adjustment. Because women live longer and tend to have lower educational levels than men, on average, when the effects of those variables are removed, it becomes clear that women are even more likely to attend, although the difference is not a dramatic one.

Region: Table 4 shows that before MCA, the West had the nation's highest participation rate (31 percent). But is this high rate due to inherent regional differences, or is it due to the fact that incomes are perhaps higher in these states, or that educational levels are higher, or that people in the West, on average, are younger? Controlling for the other independent variables decreases the participation rate in the West by 3 percentage points (to 28 percent), and raises the participation rate in the South by 3 percentage points, to the level of the Northeast and the Midwest (21 percent).

Of course, one cannot tell from these results alone whether the remaining difference (7 percentage points between the West and other regions) is due to some inherent "regionalness" or to some other variable that has not yet been included in the analysis (such as the geographic distribution of museums). In this sense, the adjusted participation rates should not be thought of as the "correct" rates, but as an attempt to isolate the effect of one explanatory variable in the context of other, specified explanatory variables.

The distinction between the one-variable-at-a-time demographic analysis in the previous section and multiple classification analysis is a reflection of the way in which the analysis will be used. The former emphasizes prediction—what is the probability that someone who lives in the West will be an attender?—while the latter emphasizes explanation—How much does living in the West contribute, by itself, to the participation rate? How well the MCA explains variation in attendance levels when all independent variables are used simultaneously can be measured with the R^2 statistic,† which is .147 here, indicating that 14.7 percent of the variation in participation rates is explained by the independent variables.

Logit Analysis

While multiple classification analysis focuses on the average value of the dependent variable for each value of each independent variable—explaining,

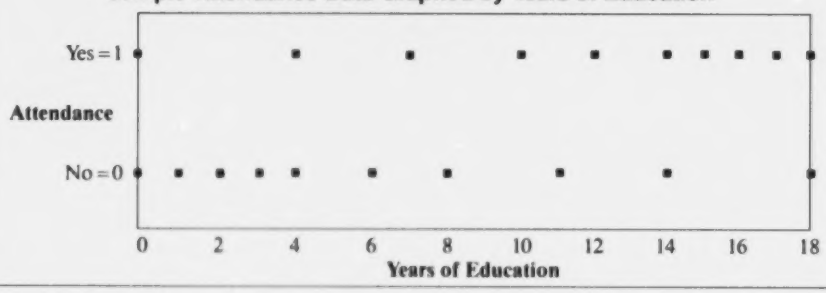
†R^2 is a "goodness of fit" measure of how well a model predicts the variation in the dependent variable. Measured on a scale of 0 to 1, the closer R^2 is to 1, the better the fit (the better the model predicts).

for example, what the participation rate is for high-income individuals while controlling for other independent variables—it is often instructive to consider instead the contribution that increases in each independent variable make to the dependent variable. For example, to determine the relationship between age and attendance, it would be useful to calculate how much the participation rate increases (or decreases) on average for every additional year of age.

In measuring museum attendance, the underlying dependent variable is dichotomous: each person interviewed either attended an art museum in the previous year or did not attend, and the individual's attendance can be expressed mathematically with a one (if he or she did attend) or with a zero (if he or she did not attend). To test the mathematical relationship between this type of dependent variable and a series of independent variables, a variation of regression analysis, called logit analysis, is often used. (Logit analysis is described further in the Appendix, where the actual mathematical results of the logit analyses used in this study are reported.) Logit analysis uses the collected data on the attendance pattern of the surveyed individuals to predict what the probability of attendance for another individual with a particular set of characteristics would be.[16]

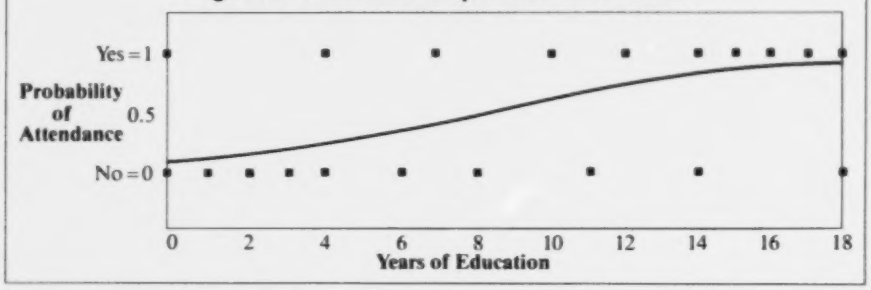
Without delving into the intricate mathematics of logit analysis, it is possible to present the essential idea with a simple example. Consider two variables: whether or not an individual attended an art museum in the previous year and that individual's number of years of education. Given what we already know about the relationship between these two variables, we expect that individuals with higher levels of education are more likely to attend. Suppose that a sample of 20 individuals revealed that 10 of them had attended and that 10 had not. Graphing these two variables for these 20 cases might lead to a graph like Figure 1a. Each square in Figure 1a represents one surveyed individual and plots the number of years of education versus whether or not that person attended an art museum in the previous year.

Figure 1a.
Sample Attendance Data Graphed by Years of Education



Using these data as a starting point, logit analysis fits an "s-shaped" curve to the data. The result would look like Figure 1b. The curve is a simplified mathematical summary of the relationship between the two variables, and its shape reflects the fact that individuals with fewer years of education are much less likely to have attended an art museum than are individuals with more years of education. Note that the vertical axis of Figure 1b is labelled "Probability of Attendance." Thus, in this example, logit analysis is using the actual attendance pattern in the survey data to predict the probability of attendance for other individuals whose educational levels are known but whose attendance patterns are unknown. The height of the curve can be interpreted as either the relative percentage of individuals at each level of education who are predicted to attend or the probability that an individual with a particular level of education will attend.

Figure 1b
Logit Curve Fitted to Sample Attendance Data



Keeping this intuitive understanding in mind, we can now turn to an analysis of the actual data. The results summarized here are from a model that predicts the probability of museum attendance as a function of income level, age, race, gender, educational level, whether the individual lives in a Standard Metropolitan Statistical Area or its central city or outside a SMSA, and whether or not the individual is a student. (The actual mathematical results of running this logit analysis are reported in Table A of the Appendix.)

It is not necessary to understand the mathematics that lead to logit results in order to be able to interpret the key findings. Logit results can be used to help us answer three rather straightforward analytical questions concerning museum attendance patterns:

- Is an increase in each independent variable associated with an increase or a decrease in the participation rate?
- How strong is the increase or decrease in each case? Is the increase or decrease that is detected in the sample survey data strong enough

so that one can conclude that the same relationship holds for the entire adult population of the United States?

- What do the results tell us about the probability of attendance for particular individuals whose demographic characteristics are known?

Asking these questions of the logit analysis reported in Table A of the Appendix leads to a number of interesting results. The signs of six of the thirteen independent variables are negative, indicating that there is an inverse relationship between these variables and the probability of attendance. The negative coefficient of age indicates that as an adult gets older, all else being equal, his or her probability of attendance goes down. The signs for Blacks and other minority racial groups are also negative, indicating that the probability of attendance for these racial groups is lower than the probability of attendance for whites. But the coefficient for "other" minority racial groups is not statistically significant, so the evidence is not strong enough to be able to conclude that in the overall population minority groups other than Blacks have a probability of attendance that is actually different from that of whites.

The signs of the seven other variables are positive. The positive coefficients for the two highest income groups indicate that individuals in these groups (incomes of $25,000 and above) have a higher probability of attendance than individuals in lower income groups. The coefficient of education is also positive, indicating that for every additional year of formal education, the probability of attendance goes up. The positive coefficient of the gender variable indicates that the probability of attendance for women is higher than the probability for men. And the positive coefficients of the geography variables indicate that people who live in Standard Metropolitan Statistical Areas (i.e., relatively urbanized areas) are more likely to attend than people who live outside of these areas. All of the positive coefficients are statistically significant, indicating that these results would be expected to be replicated in the population at large.

A summary measure of how well the logit curve actually fits the data is R^2. For this analysis $R^2 = .16$; sixteen percent of the variation in the dependent variable is explained by the independent variables in this model. While the R^2 statistics for both the multiple classification analysis and the logit analysis seem low, it is important to keep them in mind as benchmarks against which further analyses and other studies might be judged. As our ability to explain museum attendance improves, the predictive capability of our models will increase. The next section of this study, for example, will report the results of a better logit model that includes variables that measure the degree of an individual's socialization into the arts.

Finally, logit results can be used to predict the probability of attendance for particular individuals whose characteristics are known. For example, the probability of attendance for a white female who is 40 years old, has 16 years of formal education, lives in the central city of an SMSA, has an income between $15,000 and $24,999, and is not currently a student is estimated at 52 percent. The probability is calculated by inserting the actual values of the variables for this sample individual into the equation that results from the logit analysis.

These results can also be used to graph the relationship between the probability of attendance and each of the independent variables. Figure 2a is a graph of the relationship between probability of attendance and educational level for the sample female attender; it is the result of letting years of education vary while keeping all of the other variables the same as in the example above. Overall, the graph shows the probability of attendance rising dramatically across levels of education to a high of nearly 78 percent, a striking depiction of the importance of education in explaining participation. The specific example calculated above occurs on the right hand side of Figure 2a at the point where education is equal to 16 years and the probability of attendance equals 52 percent.

Similarly, Figure 2b fixes all of the independent variables except age to their values for the sample individual in order to graph the relationship between probability of attendance and age. This graph shows that once the other independent variables have been controlled for, the probability of attendance tends to decline slightly as age increases.

In summary, using logit analysis affords a different view of the data; it focuses on the contribution that each independent variable makes to the probability of attendance and leads to a precise measurement of that contribution. For most purposes, however, the most important contribution this analysis makes to an understanding of these relationships is what it tells us about the direction and the strength of these relationships. And the availability of the SPPA data allow researchers in the field to explore these questions for the first time.

Figure 2a
Logit Analysis—Graph of the Probability of Attendance by Education for Sample Individual

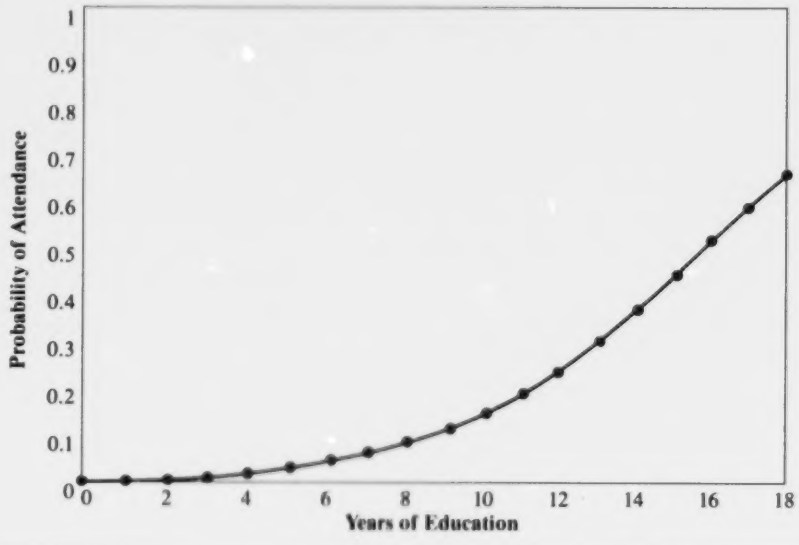
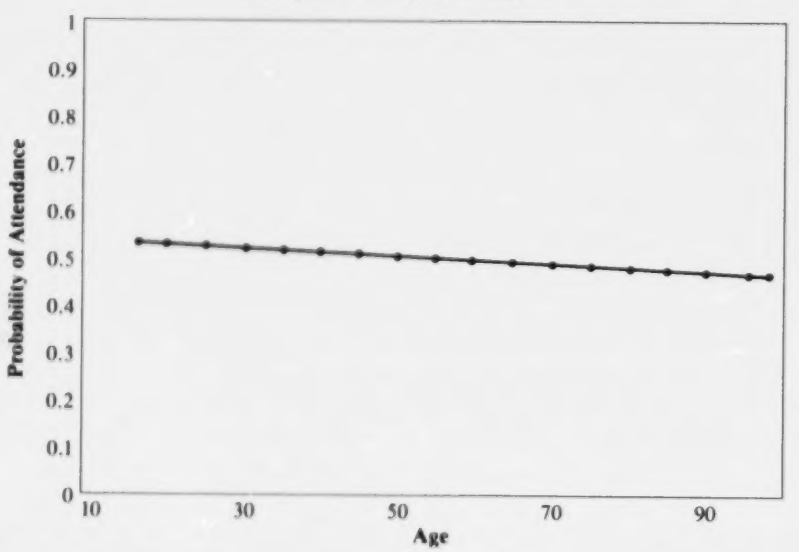


Figure 2b
Logit Analysis—Graph of the Probability of Attendance by Age for Sample Individual



Part II: Socialization and Art Museum Attendance

The fact that the model presented in Part I had such a low ability to predict the probability of attendance suggests that there must be factors in an individual's background other than simple demographics that help explain attendance at art museums. One place to look for additional explanatory variables is to the possible role played by socialization activities such as art lessons.

This section focuses on three SPPA socialization questions that are most likely to be linked to attendance at art museums: whether or not, and at what ages, the respondent had ever taken lessons in the visual arts; whether or not, and at what ages, the respondent had taken art appreciation classes; and whether or not, and the frequency with which, parents had taken the respondent to art museums.

An analysis of these questions reveals that all three of these factors show a strong relationship with increased attendance (Table 5). The overall attendance rate of 22 percent rises to 45 percent for those who had taken visual arts lessons. For those who had not taken these lessons, the participation rate is only 15 percent. The pool of visitors to art museums during the previous year is divided approximately in half between those who have taken art lessons and those who have not. Having taken a class in art appreciation or art history raises the participation rate to 51 percent, but among visitors the ratio of those who had not taken a class to those who had is 5:4. Yet, actual museum visitors are split in half between those who had taken lessons and those who had not.

Attendance is highest for those whose first lessons were either during the elementary school years or during the college years (62 and 54 percent, respectively), suggesting that both earliness of socialization and the individual's explicit choice of a socialization experience—as opposed to an educational or parental requirement—can be important factors in future attendance.

Similarly, the influence of these classes is smaller during the high school years (39 percent participation) than in either elementary school (66 percent) or in the years after high school (57 and 61 percent). The figure of 66 percent attendance for adults who had taken an art appreciation course in elementary school is one of the highest art museum participation rates found in the SPPA data when considering the effects of a single independent variable.

The participation rate is 55 percent for those who remembered having attended art museums frequently with their parents. The rates for those who

Table 5
Socialization and Attendance at Art Museums and Art Galleries, 1985

Question: *Have you ever taken lessons or a class in visual arts such as sculpture, painting, print making, photography, film making, etc.?*

	Participation rate	Per 1,000 Adults	
		Number	Number in category
All adults	22%	219	1,000
who had taken lessons	45%	112	248
who had not taken lessons	15%	110	752
Adults who first took lessons at less than 12 years	62%	21	33
12–17 years	37%	43	115
18–24 years	54%	30	56
25+ years	40%	18	44
Adults who attended an art museum	50% had taken lessons	110	219
	50% had not taken lessons	109	219
Adults who had not attended an art museum	18% had taken lessons	137	781
	82% had not taken lessons	644	781

Question: *Have you ever taken a class in art appreciation or art history?*

All adults	22% attended	219	1,000
who had taken a class	51% attended	99	194
who had not taken a class	15% attended	122	806
Adults who first took a class at less than 12 years	66% attended	4	6
12–17 years	39% attended	26	68
18–24 years	57% attended	60	105
25+ years	61% attended	8	14
Adults who attended an art museum	45% had taken a class	98	219
	55% had not taken a class	121	219
Adults who had not attended an art museum	12% had taken a class	95	781
	88% had not taken a class	686	781

Question: *Did your parents—or other adult members of the household—take you to art museums or galleries often, occasionally, or never?*

Adults who had attended frequently with parents	55% attended	26	47
occasionally with parents	35% attended	105	297
never attended with parents	14% attended	92	656

Source: "Survey of Public Participation in the Arts," 1985.

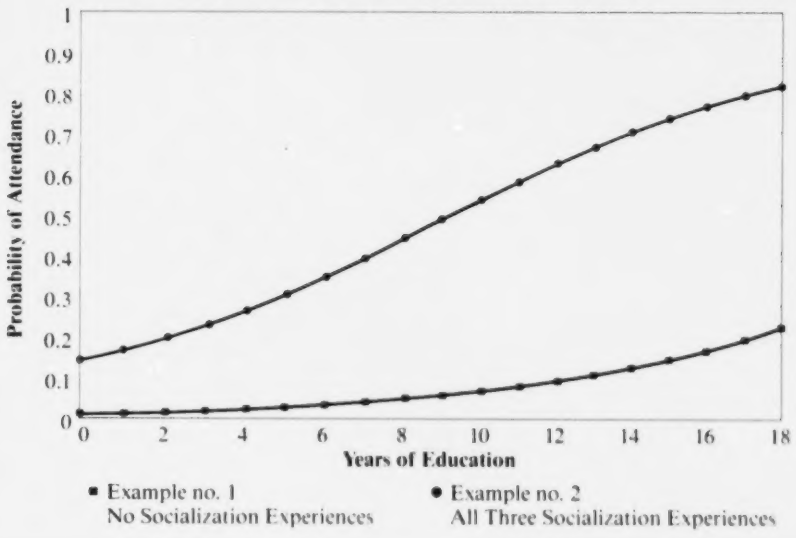
visited occasionally with their parents and those who never visited with their parents are 35 percent and 14 percent, respectively.

A logit model was run to see what happens to the probability of attendance participation rate when these three socialization factors are accounted for simultaneously, along with the demographic variables considered earlier. The results are reported in Table B in the Appendix. All of the socialization variables, along with education, turn out to be highly significant statistically. Age, the race variable for Blacks, and the highest income group variable also have coefficients that are statistically significant.

All of the socialization variables add considerably to the probability of attendance. This can be most clearly seen using a graph like the one presented earlier. Figure 3 shows the relationship between the probability of attendance and education level for the sample individual with none of the three socialization experiences (Example no. 1) and with all three (visual art lessons, attendance with parents, and an art appreciation course) of the socialization experiences (Example no. 2). While the probability of attendance still increases with higher levels of education as before, the increase in the probability of attendance due to socialization is very striking.

This model is a better one than the model formulated in Part I, which used only demographic variables. The proportion of the variation explained

Figure 3
Logit Analysis—Graph of the Probability of Attendance by Education for Sample Individual with Socialization Variables



improved from 16 percent to 22 percent. The improvement was primarily in the model's ability to predict correctly those who actually attend (47 percent in the socialization model as opposed to 27 percent in the raw demographic model), but this model is still a long way from what one would like to have in a predictive model.

Part III: Unsatisfied Demand and Barriers to Attendance

If two adults out of nine attended an art museum or an art gallery in the previous year, seven did not. Who are the individuals who do not attend museums? Why? Who would like to attend more? Who are the *potential* members of the museum audience? The answers to these questions are of concern both to museums that would like to market their services more effectively and to funding agencies that would like to expand the reach of arts organizations into previously unserved or underserved segments of the community.

Unsatisfied Demand

SPPA data on the responses of adults who said they would like to attend art museums more often must be approached with a degree of skepticism for two reasons. First, respondents' answers are based on hypothetical situations rather than on actual behavior. It is easier to say you would like to go more often than to actually exert the effort to go. Second, when attention is restricted to demographic variables only, they become the only possible explanations for unsatisfied demand or non-attendance that are readily available. This again runs the risk of concluding that survey respondents are prisoners to their demographics.

Table 6 shows that nearly a third of American adults would like to attend art museums more often. Yet 58 percent of the individuals who are already attenders would like to go more often, while only 23 percent of non-attenders would like to attend more frequently. (Interestingly, this percentage remains quite high across participation levels: of those individuals who indicated that they had attended an art museum two or three times in the previous month, 62 percent indicated that they would like to go more during a year; of those who attended six or more times in the previous month, 52 percent indicated they would like to attend more often.) But because of the large number of non-attenders in the adult population, nearly 60 percent of those who would

Table 6
Unsatisfied Demand for Attendance at Art Museums and Art Galleries, 1985

Question: *Few people can do everything they would like to do. But if you could do any of the things listed on this card as often as you wanted, which ones would you do more often than you have during the last 12 months?*

		Per 1,000 Adults	
	Percentage who checked museums	Number Who Checked Museums	Number in Category
Overall	31%	307	1,000
Attendance			
Attenders	58%	128	219
Non-Attenders	23%	179	718
Income			
$5,000 or less	25%	21	82
$5,000–$9,999	25%	31	126
$10,000–$14,999	27%	39	143
$15,000–$24,999	29%	72	247
$25,000–$49,999	36%	111	308
$50,000 or more	45%	42	94
Education			
Grade School	12%	13	110
Some High School	22%	26	118
High School Grad	29%	108	376
Some College	38%	77	203
Four-year College Grad	44%	48	220
Graduate School	44%	36	82
Age			
18–24 years	34%	55	161
25–34 years	35%	82	238
35–44 years	35%	63	182
45–54 years	27%	36	132
55–64 years	28%	36	130
65–74 years	26%	25	97
75+ years	17%	10	59
Gender			
Females	33%	173	528
Males	28%	134	472
Race			
Black	25%	27	108
White	32%	277	873
Other	18%	3	19

Source: "Survey of Public Participation in the Arts," 1985.

like to go more often are currently not attending. The problem for a museum is that these individuals are considerably more difficult to identify than those who are already attenders.

As both income and education levels increase unsatisfied demand rises to a high of four adults out of nine. By income, more than a third of the individuals with unsatisfied demand can be found in the $25,000–$49,999 income group; by education, nearly a third can be found among those whose highest level was graduation from high school. When we examine the effect of age, unsatisfied demand remains roughly constant at 35 percent for individuals age 16–44, but then begins to decline.

To determine which demographic variables predict best those individuals who are most likely to have unsatisfied demand, a logit model was run. The actual logit results are reported in Table C of the Appendix. Education emerges from this model as the most important predictor of unsatisfied demand, with a positive coefficient and the highest level of statistical significance among the variables tested. The probability of unsatisfied demand rises with the number of years of education and is generally higher at higher levels of income (except for the $15,000–$24,999 category). The probability of unsatisfied demand decreases gradually with age. Women are more likely to have unsatisfied demand than men; whites are more likely to have unsatisfied demand than Blacks or other racial groups; students are more likely than non-students; and the probability of unsatisfied demand rises with increased urbanization.

The results show that while the model does help in identifying the variables that are most highly significant in a statistical sense, the overall performance of the model is again very weak. The model only explains 5 percent of the variation in the dependent variable. Although there are statistically detectable relationships between the demographic variables and unsatisfied demand, there is a lot more variation in unsatisfied demand that cannot be accounted for by these demographic variables. Together, these findings suggest the beginning of an explanation, but they are far from being determinant.

Barriers to Attendance

Do these results concerning unsatisfied demand reflect a general view among the population that museums are worthy things to attend and that more attendance would be preferable to less? Or is attendance actually constrained by other factors, which, if they were removed, would result in increased attendance? If the key binding constraints are ones that could be changed by

museums, some interesting possibilities could arise for museums that are trying to decide how to attract new audiences and increase their old audiences.

During one of the six months of the 1985 SPPA survey, respondents were asked about their reasons for not attending more often. The survey questionnaire offered the interviewers fifteen specific reasons according to which they coded the oral responses; they could check more than one if several factors seemed important. The results are summarized in Table 7.

Before examining these results, it is important to realize that few of the barriers to attendance included in the SPPA are barriers that are within the direct control of the museums themselves. This is not to say that there are not important barriers to attendance that are the result of choices made by museum officials, only that these cannot be documented within the confines of the SPPA surveys.

Overall, few of these barriers seem to have a serious effect on attendance. A very small percentage of the adult population cites each one (with the exception of the vague reasons "not enough time" and "lack of motivation"). Yet, 31 percent of the adult population cited one or more of these reasons for non-attendance. Although many people have reasons for not attending more, those reasons are diffuse.

A second overall pattern of interest is that for every barrier except "prefer to watch TV," the percentage of attenders who cite each barrier is greater than or equal to the percentage of non-attenders. This further reinforces the finding that unsatisfied demand is greater among those who are already attenders.

Some of the individual findings deserve more attention. The most frequently cited barrier is not having enough time (13.7 percent of the population). One barrier that might have been expected to have been selected more often is "feeling uncomfortable"—it is often suggested that arts institutions make it very difficult for the uninitiated to feel that the institution is accessible to them. Yet, only one-tenth of one percent of the population felt this to be a problem. (Interestingly, low percentages like this are found across all of the art forms included in SPPA.)

A moderate percentage of individuals cites "lack of availability" or "too far to go" as reasons for lower attendance. While it seems that this could be attributed to the geographic distribution pattern of museums, without further comparative data on the distribution of respondents we cannot be sure; it is also possible that these answers were used by respondents to express an inaccessibility that was part psychological as well as geographical.

To better target potential museum audiences, it will help to take this analysis one step further and ask, "Of those with unsatisfied demand, what

Table 7
Barriers to Attendance at Art Museums and Art Galleries, 1985

Question: *What are the reasons you did not attend art galleries/art museums more often? Any other reasons?*

	Percent Citing Barrier	Per 1,000 Adults	
		Number Citing Barrier	Number in Category
Tickets sold out			
All Adults	0.1%	1	1,000
Attenders	0.4%	1	219
Non-Attenders	0.0%	0	718
Cost			
All Adults	4.0%	40	1,000
Attenders	5.7%	13	219
Non-Attenders	3.5%	27	718
Not available			
All Adults	6.4%	64	1,000
Attenders	11.4%	25	219
Non-Attenders	4.9%	39	718
Too far to go			
All Adults	6.7%	67	1,000
Attenders	13.9%	30	219
Non-Attenders	4.6%	36	718
Transportation/Traffic/ Parking problems			
All Adults	2.7%	27	1,000
Attenders	3.7%	8	219
Non-Attenders	2.5%	19	718
Crime or fear of crime			
All Adults	0.6%	6	1,000
Attenders	0.6%	1	219
Non-Attenders	0.6%	5	718
Feel uncomfortable			
All Adults	0.1%	1	1,000
Attenders	0.1%	*	219
Non-Attenders	0.1%	1	718
Poor Quality/Not very good, etc.			
All Adults	0.4%	4	1,000
Attenders	0.9%	2	219
Non-Attenders	0.3%	2	718

Table 7 (Continued)

	Percent Citing Barrier	Per 1,000 Adults: Number Citing Barrier	Per 1,000 Adults: Number in Category
Don't have anyone to go with			
All Adults	1.6%	16	1,000
Attenders	2.2%	5	219
Non-Attenders	1.4%	11	718
Problem related to a handicap			
All Adults	0.4%	4	1,000
Attenders	0.5%	1	219
Non-Attenders	0.3%	3	718
Problem related to age/health			
All Adults	0.7%	7	1,000
Attenders	1.2%	3	219
Non-Attenders	0.6%	5	718
Babysitter problems/ Must care for children			
All Adults	1.7%	17	1,000
Attenders	3.5%	8	219
Non-Attenders	1.2%	9	718
Prefer to watch TV			
All Adults	0.9%	9	1,000
Attenders	0.2%	*	219
Non-Attenders	1.1%	9	718
Don't have time			
All Adults	13.7%	137	1,000
Attenders	27.9%	61	219
Non-Attenders	9.7%	75	718
Procrastination/ Lack of Motivation			
All Adults	4.0%	40	1,000
Attenders	8.2%	18	219
Non-Attenders	2.7%	21	718

Source: "Survey of Public Participation in the Arts," 1985.

Notes: For each barrier to attendance, the number of attenders plus the number of non-attenders who cited the barrier do not necessarily add up to the total number of adults who cited it because of rounding errors.

*Less than one person per thousand.

Table 8
Barriers to Attendence and Unsatisfied Demand, 1985

Question: *What are the reasons you did not attend art galleries/art museums more often?*

		Per 1,000 Adults	
	Percent Citing this Barrier	Number Citing this Barrier	Number in Category
Cost			
All adults with unsatisfied demand	12.8%	39	307
Attenders	9.5%	12	129
Non-Attenders	15.2%	27	178
Not available			
All adults with unsatisfied demand	20.3%	62	307
Attenders	18.6%	24	129
Non-Attenders	21.5%	38	178
Too far to go			
All adults with unsatisfied demand	21.5%	66	307
Attenders	23.5%	30	129
Non-Attenders	20.1%	36	178
Feel uncomfortable			
All adults with unsatisfied demand	0.4%	1	307
Attenders	0.2%	*	129
Non-Attenders	0.5%	1	178
Poor quality/Not very good, etc.			
All adults with unsatisfied demand	1.2%	*	307
Attenders	1.2%	*	129
Non-Attenders	1.2%	*	178
Don't have time			
All adults with unsatisfied demand	44.3%	136	307
Attenders	47.6%	61	129
Non-Attenders	42.0%	75	178
Procrastination/Lack of motivation			
All adults with unsatisfied demand	12.8%	39	307
Attenders	13.8%	18	129
Non-Attenders	12.0%	21	178

Source: "Survey of Public Participation in the Arts," 1985.

*Less than one person per thousand.

percentage cites each of these barriers?" (Table 8) In this case, both discomfort and lack of quality remain unimportant barriers to participation; but cost, availability, distance, and lack of time are all of significantly higher importance among those who also said that they would like to be able to attend or to attend more frequently. The responses to the last barrier, "lack of motivation," are more difficult to interpret; there is a paradox in the fact that even 12 to 13 percent of those who expressed a desire for more attendance cite "lack of motivation" as a barrier to attendance.[17]

Part IV: Profiles of the Museum Audience(s)

Up to this point the analysis has focused on demographic groups one at a time and asked what percentage of each group attends art museums, what percentage of the group would like to attend more, and what percentage of the group cites specific reasons for not attending more. This section takes a different perspective, and examines how the demographic characteristics of the SPPA respondents are distributed among the museum audience and how this audience profile compares to the profile of the general population.

But proceeding with this analysis requires a much clearer definition of the group of individuals we are actually referring to when we speak of the "museum audience." The audience a museum sees coming through its doors is not the same as the audience that is documented in a cross-sectional sample of the population, such as the SPPA. This is true for two reasons. First, the audience of a particular museum will differ from the overall average audience profile resulting from a population survey, each museum will be operating in the midst of a number of microfactors that are not typical of the abstract, "average" museum. A museum's ability to attract certain demographic groups is a function of both its own programming choices, which make it more attractive to certain demographic groups than to others, and of the demographic groups that actually live near enough to make access easy of the museum.

Second, a cross-sectional survey of the adult population allows the identification of *visitors* (and non-visitors), while a survey of admissions at the door of the museum is a survey of *visits*. The fundamental difference lies in differences in frequency of attendance. A visitor who is a frequent attender is much more likely to be picked up in a survey within a museum than an individual who attends, but infrequently. A museum that wishes to figure out how many *different* individuals it is serving and who they are in demographic terms must carefully account for the fact that frequent attenders are more

likely to appear in audience samples in proportion to their frequency of attendance.[18]

While it is undoubtedly an oversimplification, it is not unreasonable to suggest that the audience that is perceived by the museum is the audience of visits, while the audience on which funding agencies focus is the audience of visitors. But which focus is ultimately appropriate is a function of which decisions are at stake. A museum that is interested in better targeting its museum shop to its market, for example, will be concerned with the income profile of visits. The museum that is trying to target its activities to new population groups may be more concerned with the demographics of visitors. The funding agency that is concerned about outreach and new constituencies will stress visitors, while a funding agency that is trying to assess how reliant a museum can become on paid admissions (in order to determine appropriate levels of government or private funding) will stress visits.

Tables 9a and 9b summarize the distribution of visitors and visits according to several of the demographic variables and compare those distributions to the corresponding distributions for the adult population. To estimate visits from the 1985 SPPA data in order to construct these tables, individuals who indicated they had visited an art gallery or art museum in the previous year were weighted according to their stated frequency of attendance.[19]

Figures 4a and 4b and 5a and 5b display some of the information in Tables 9a and 9b as bar charts, giving audience profiles according to income and education—two of the key variables whose distribution museums attempt to manage through reaching out to new and underrepresented constituencies—and comparing them to the overall adult population.

Looking first at the distribution of visitors, the audience is composed disproportionately of individuals with incomes over $25,000 (as compared to their relative proportion in the overall population). Also overrepresented are individuals with more than a high school education. Visitors are slightly younger, more likely to be white, and less likely to come from outside of urbanized areas than the overall adult population. Professionals are twice as likely to be found among visitors to art museums as among the general population.

Among visits, upper income and more highly educated individuals are even more overrepresented, indicating that these individuals are not only more likely to attend art museums but that they also attend more frequently. From the individual museum's perspective, this means that an income or education profile of visits will give a picture of an audience more weighted toward the upper categories than a profile of the actual, identifiable visitors

Table 9a
Audience Profiles 1985: Percent Distribution

	Adult Population	Visitors	Visits
Income[†]			
$4,999 or less	8%	6%	9%
$5,000–$9,999	13%	7%	7%
$10,000–$14,999	14%	9%	10%
$15,000–$24,999	25%	21%	20%
$25,000–$49,999	31%	38%	27%
$50,000 or more	9%	19%	27%
	100%	100%	100%
Education			
Grade School	11%	2%	1%
Some High School	12%	4%	4%
High School Grad	38%	24%	13%
Some College	20%	27%	29%
Four-year College Grad	11%	23%	25%
Graduate School	8%	21%	28%
	100%	100%	100%
Age			
18–24 years	16%	16%	21%
25–34 years	24%	28%	23%
35–44 years	18%	22%	23%
45–54 years	13%	14%	14%
55–64 years	13%	11%	8%
65–74 years	10%	7%	7%
75+ years	6%	3%	3%
	100%	100%	100%
Gender			
Female	53%	55%	52%
Male	47%	45%	48%
	100%	100%	100%
Race			
Black	11%	5%	3%
White	87%	93%	92%
Other	2%	2%	5%
	100%	100%	100%
Urbanization			
Central City of SMSA	27%	31%	45%
SMSA but not Central City	41%	49%	40%
Outside an SMSA	32%	20%	15%
	100%	100%	100%

Source: "Survey of Public Participation in the Arts," 1985.

[†]The income distribution of the population reported here differs from the data in the 1985 Current Population Survey, which shows a higher proportion of the population in the upper income groups. Nevertheless, the figures reported here are internally consistent with the SPPA data and relative comparisons of the population to visitors and visits are the best possible with the available data.

Table 9b
Audience Profiles 1985: Number per 1,000 Adults

	Adult Population	Visitors	Visits
Income[†]			
$4,999 or less	Of 82 adults, there were	13 visitors, making	66 visits
$5,000– $9,999	126	14	53
$10,000–$14,999	143	21	77
$15,000–$24,999	247	47	149
$25,000–$49,999	308	85	200
$50,000 or more	94	42	206
Education			
Grade School	110	4	7
Some High School	118	8	29
High School Grad	376	53	97
Some College	203	60	218
Four-year College Grad	110	50	188
Graduate School	82	45	212
Age			
18–24 years	161	35	161
25–34 years	238	61	176
35–44 years	182	48	170
45–54 years	132	30	105
55–64 years	130	24	62
65–74 years	97	16	54
75+ years	59	6	24
Gender			
Female	528	121	392
Male	472	99	359
Race			
Black	108	12	23
White	873	203	693
Other	19	5	35
Urbanization			
Central City of SMSA	271	69	339
SMSA but not Central City	413	107	302
Outside an SMSA	316	44	110

Source: "Survey of Public Participation in the Arts," 1985.

[†]The income distribution of the population reported here differs from the data in the 1985 Current Population Survey, which shows a higher proportion of the population in the upper income groups. Nevertheless, the figures reported here are internally consistent with the SPPA data and relative comparisons of the population to visitors and visits are the best possible with the available data.

Figure 4a
Education Profile of the Audience for Art Museums and Art Galleries, 1985: Distribution of Visitors, Visits, and the Adult Population

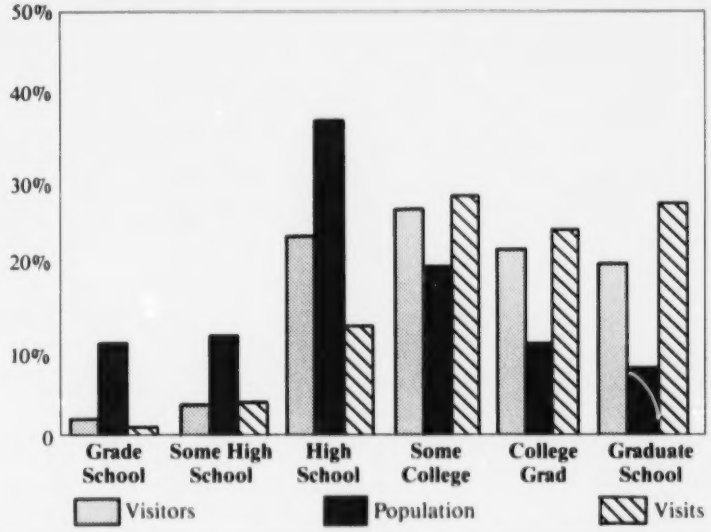


Figure 4b
Education Profile of the Audience for Art Museums and Art Galleries, 1985: Total Number of Visitors, Visits, and the Adult Population

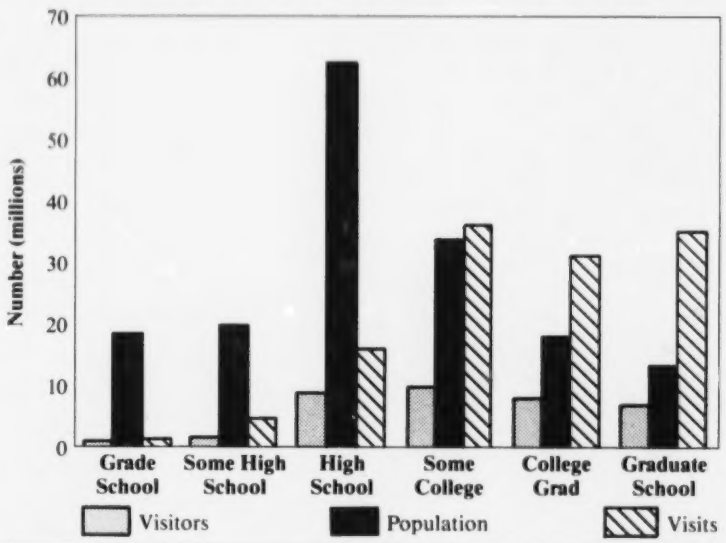


Figure 5a
Income Profile of the Audience for Art Museums and Art Galleries, 1985: Distribution of Visitors, Visits, and the Adult Population

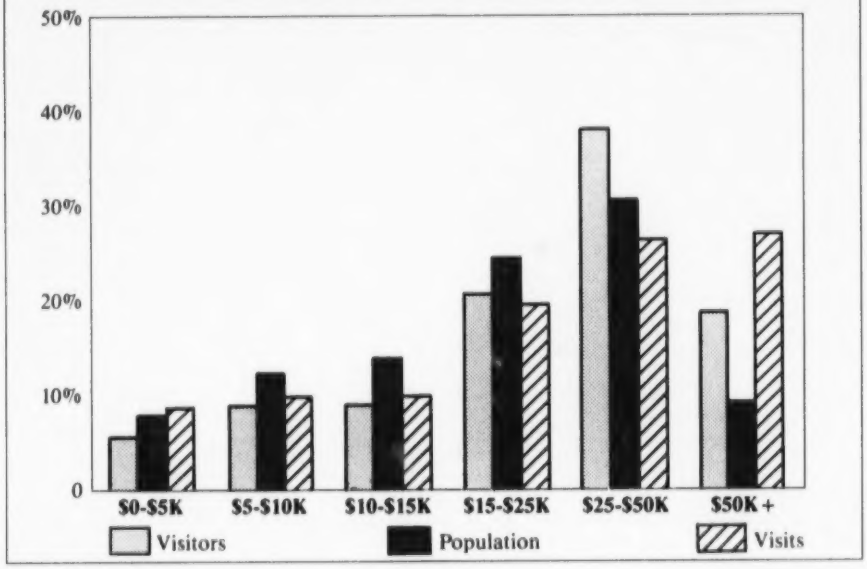
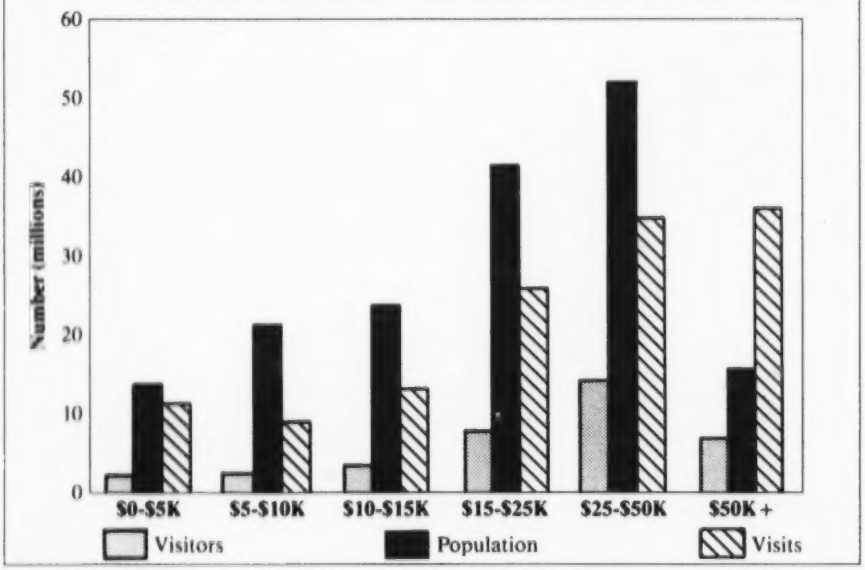


Figure 5b
Income Profile of the Audience for Art Museums and Art Galleries, 1985: Total Number of Visitors, Visits and the Adult Population



who are being served. This is not a new phenomenon; earlier studies have noticed much the same pattern, which has not changed substantially in the 25 years for which various data sources are available.[20]

While these distributions provide useful bases by which to compare both aggregate changes in the museum audience over time and a particular museum's audience to the aggregate audience, one should not be too hopeful that interventions in the operation of art museums will succeed in dramatically changing the audience profile. These aggregate profiles are very robust, reflecting a variety of factors, not the least of which is the interaction of the population's tastes with its demographic characteristics. Research into audience demographics has repeatedly shown that while short-term changes in the audience profile may be attained through very visible and popularly attractive exhibitions or programs, it is much more difficult to sustain these changes over a longer period.[21]

But note that a growth in *attendance figures* is not incompatible with an overall stability in the *profile* of the audience. The *size* of the audience can increase, either through new attenders or through increases in the frequency of attendance of previous attenders, while the demographic profile of the audience might change very little (except to reflect general societal changes in the level of income or the level of education). Another way to state this is that the raw numbers per 1,000 adults in Table 9b could increase while the relative percentages in Table 9a remained more or less the same.

Table 10 shows the average number of visits per adult and visits per visitor disaggregated by income and by education level. The average number of visits per adult per year is 0.75; this means that the average American adult attends an art museum or art gallery once every 16 months. Visits per adult remain more or less at this level across income groups, with the exception of individuals with incomes over $50,000. These adults attend art museums an average of 2.26 times per year. Looking at only those visitors who actually visited an art museum in the previous year, the average number of visits per visitor is 3.42; individuals who go to art museums go slightly more than once every four months. Only the lowest income group (5.33 visits per visitor) and the highest income group (5.03 visits per visitor) have rates substantially different from the overall rate. (Separating students from non-students does not remove the apparent anomaly in the lowest income group.)

Across education levels, visits per person increase from 0.06 to 2.58. Visits per visitor are lowest for individuals with only a grade school education—1.60—and highest for those with at least some graduate school education—4.69. The dip to 1.84 visits per visitor for high school graduates is another anomaly in the data.

Table 10
Frequency of Attendance by Income and Education, 1985

	Visits Per Adult	Visits Per Visitor
Overall	0.75	3.42
Income		
$4,999 or less	0.83	5.33
$5,000–$9,999	0.43	3.75
$10,000–$14,999	0.55	3.80
$15,000–$24,999	0.62	3.28
$25,000–$49,999	0.67	2.41
$50,000 or more	2.26	5.03
Education		
Grade School	0.06	1.60
Some High School	0.24	3.64
High School Grad	0.26	1.84
Some College	1.08	3.65
Four-year College Grad	1.71	3.80
Graduate School	2.58	4.69

Source: "Survey of Public Participation in the Arts," 1985.

Note: The number of visits per year for each respondent was estimated from the respondent's answer to the question: "How many times did you do this [visit an art museum or an art gallery] last month?" For a detailed discussion of the procedure used, see Note 19.

Projecting the estimate of 0.75 visits per adult to the entire 1985 adult population leads to a rough estimate of 128 million visits made by 37.5 million adult American visitors to art museums and art galleries in 1985. However, because of the number of assumptions necessary to derive an overall estimate from the SPPA data, one should not place too much confidence in this overall estimate.

What do other sources say about the volume of attendance at American art museums? *Museums USA* was the first major cross-sectional study of American museums. It estimated that in 1971–1972 there were 1,821 museums that met the accreditation criteria of the American Association of Museums, 340 of which were primarily art museums.[22] According to the survey results, art museums had an average attendance of 127,000 in that year, for a total of 43 million visits. The 186 art/history museums had an

average attendance of 94,000 visits, or an additional 17.5 million visits, for a total of 60.5 million visits to art and art/history museums. This study employed a broad definition of attendance, including general attendance by adults, children, and foreign tourists, and attendance at special exhibitions, by school class groups, at workshops and classes, and performing arts presentations, films, etc. Taken together these lead to a more inclusive total attendance figure than the one that can be derived from SPPA.

More recently, the Institute of Museum Services commissioned the National Center for Education Statistics to undertake a more comprehensive study of the museum universe.[23] This 1979 study used a slightly broader definition of a museum that included nonprofit museums without professional staff. This study identified a universe of 4,408 museums, 609 of which were defined as primarily art museums. These museums had an average annual attendance of 81,817. This figure is lower than the *Museums USA* figure from seven years earlier because of the broader definition of museums, which brought many smaller museums into the overall calculations, rather than because of any substantial fall in museum attendance. This figure projects a total of 49.8 million visits in 1979. Yet, these figures are not particularly reliable because the survey also uncovered the fact that only 247 of the art museums were using what could be termed "accurate attendance measurement methods"; the others were forced to estimate. Once again, this total includes many individuals beyond the American adults on whom SPPA focused.

Despite their drawbacks, these benchmarks suggest that the aggregate figures derived from SPPA reflect overestimation on the part of the respondents. It would not be surprising if the SPPA-derived estimate is high by a factor of two or more.

But the estimate derived from the SPPA data is not as high as the estimate of total attendance that one would infer from the Harris *Americans and the Arts* data.[24] Though the documentation is not explicit as to how the calculations were made, Harris reports a mean of 2.7 visits per visitor for his data (lower than the comparable estimate from SPPA data). Adjusting this figure by the participation rate calculated by Harris leads to a mean of 1.57 visits per adult in the U.S. population. Multiplying this figure by the size of the adult population leads to the highest attendance estimate of all, 267 million visits to art museums by American adults in 1984.

Although the overall estimates derived from the SPPA frequency of attendance data seem high, that does not necessarily imply that the distributions of visits are incorrect. Unless one wishes to argue that individuals in certain income groups or educational levels are more likely to overestimate

their attendance patterns than individuals in other demographic groups, using the relative frequency of attendance to generate the distributions of visits presented in Tables 9a and 9b is a reasonable procedure and provides the best currently available profiles of the American audience for art museums.

Conclusion

An understanding of audiences for museums begins with attendance figures and is enhanced by demographic information, but it will not be complete without a better understanding of why people visit museums and how those visits are integrated into *their* value system. That work is just beginning.

One of the next steps is to turn to measures of museum effectiveness: What is the *quality* of a visit to a museum? In studying their audiences, museums will do well to heed the reminder of Alma Wittlin:

> Neither visitors' books in which the attendance is supposedly registered nor the stricter control of the turnstile at the gate of the museum which mechanically records the number of visitors is a true indicator of performance. At their best they record the number of warm bodies entering the premises.[25]

A museum can change itself or it can work to change its audience. Either kind of change will be difficult, but it will be impossible to measure one important aspect of that change—changes in the makeup of its audience—if the museum does not document and understand its current audience first.[26]

It is my hope that in this monograph I have provided a solid base on which museums can begin, or expand, the study of their own audiences in a systematic fashion. It is increasingly important for a museum to understand the population it serves as well as the population it does not yet serve.[27]

NOTES

1. Alma S. Wittlin, *Museums: In Search of a Usable Future* (Cambridge, Mass.: M.I.T. Press, 1970), p. 76.
2. Ibid., pp. 102–103.
3. Nathaniel Burt, *Palaces for the People: A Social History of the American Art Museum* (Boston: Little, Brown and Company, 1977), pp. 282–283; and Karl E. Meyer, *The Art Museum: Power, Money, Ethics* (New York: William Morrow and Company, 1979), pp. 64, 121.
4. Paul DiMaggio, Michael Useem, and Paula Brown, *Audience Studies of the Performing Arts and Museums: A Critical Review*, Research Division Report #9 (Washington, D.C.: National Endowment for the Arts, November 1978).
5. Ibid, p. 33. An example of the latter approach is contained in Alan L. Feld, Michael O'Hare, and J. Mark Davidson Schuster, *Patrons Despite Themselves: Taxpayers and Arts Policy* (New York: New York University Press, 1983), pp. 74–75.
6. The reader who wishes to extrapolate these findings to estimates for the entire American population can multiply any of the figures reported in the tables that are expressed in terms of number per 1,000 adults by 170,520. This multiplication will weight these figures to the size of the adult American population in 1985, which the U.S. Bureau of the Census estimated at 170,520,000 in constructing its own weighting for SPPA '85.
7. Unfortunately, because the Bureau of the Census has masked the regional variables on the data tape that is publicly available to protect the confidentiality of the respondents, it is not possible to explore regional differences any further than through the simple analyses that are presented at the end of Table 1. These analyses were prepared separately by the Bureau of the Census from the complete data tape and provided to the National Endowment for the Arts.
8. National Research Center of the Arts, Inc., *Americans and the Arts: A Survey of Public Opinion* (New York: Associated Councils of the Arts, 1975), [1973 study]; National Research Center of the Arts, Inc., *Americans and the Arts: A Survey of the Attitudes Toward and Participation in the Arts and Culture of the United States Public* (New York: Associated Councils of the Arts, August 1975), [1975 study]; National Research Center of the Arts, Inc., *Americans and the Arts* (New York: American Council for the Arts, 1981), [1980 study]; National Research Center of the Arts, Inc., *Americans and the Arts* (New York: Louis Harris and Associates, October 1984), [1984 study]; National Research Center

of the Arts, *Americans and the Arts V: A Nationwide Survey of Public Opinion* (New York: American Council for the Arts, March 1988), [1987 study].

9. John P. Robinson, Carol A. Keegan, Terry Hanford, and Timothy A. Triplett, *Public Participation in the Arts: Final Report on the 1982 Survey*, Appendix B, unpublished report available from the Research Division, National Endowment for the Arts.
10. J. Mark Davidson Schuster, "Making Compromises to Make Comparisons in Cross-National Arts Policy Research," *Journal of Cultural Economics*, Vol. 11, No. 2, December 1987.
11. Market & Opinion Research International Limited, unpublished report on a survey conducted for BBC "Panorama," 26 November 1981 (some results from this survey have been published in John Myerscough, *Facts About the Arts 2: 1986 Edition* (London: Policy Studies Institute, September 1986), pp. 294–301); Ministère de la Culture, Service des Études et Recherches, *Pratiques Culturelles des Français: Description Socio-Demographique—Evolution 1973–1981* (Paris: Dalloz, 1982), report of a survey conducted by ARCmc; Official Statistics of Sweden, *Cultural Statistics: Activities, Economy and Cultural Habits 1980–1984* [*Kulturstatistik*] (Stockholm: Statistics Sweden, 1987); Ministère des Affaires Culturelles du Québec, *Chiffres à L'Appui*, Bulletin du Service de la Recherche et de la Planification, Vol. 2, no. 2, May 1984, pp. 9–14, report of a public opinion poll conducted by the Centre de Recherche sur l'Opinion Publique in 1983.
12. Market & Opinion Research International Limited, unpublished report on a survey conducted for BBC "Panorama," 26 November 1981. This study also found that trade union members were more likely to go to museums than non-members (31%:28%), but non-members were more likely to go to art exhibitions (15%:21%). Participation rates were highest among persons intending to vote Conservative, somewhat lower for those intending to vote Social Democrat/Liberal Alliance, and lowest for Labour (35%:29%:25% for museums and 27%:21%:13% for art exhibitions). Not surprisingly, museum participation rates were the highest among those who supported public funding for ballet, opera, or theatre: 36–38 percent of supporters attended museums, 26 to 28 percent attended art exhibitions. Participation rates were roughly three times higher for individuals who had heard of the Arts Council of Great Britain.
13. Ministère de la Culture, Service des Études et Recherches, *Pratiques Culturelles des Français*, p. 151.

14. Ministère des Affaires Culturelles du Québec, *Chiffres à L'Appui,* May 1984, pp. 9–14.
15. For a useful discussion of multiple classification analysis using an arts example with SPPA data, see John P. Robinson, Carol A. Keegan, Marcia Karth, and Timothy A. Triplett, *Public Participation in the Arts: Final Report on the 1985 Survey,* "Volume I: Overall Project Report," 1987, pp. 62–76, unpublished report available from the Research Division, National Endowment for the Arts.
16. A relatively readable presentation of logit analysis is contained in Robert S. Pindyck and Daniel L. Rubinfeld, *Econometric Models and Economic Forecasts* (New York: McGraw-Hill, 1981), pp. 275–301.
17. When I wrote about this paradox in the first draft of this monograph, I suggested that it might indicate a separation between societal expectations—"I ought to go to museums because it is considered a worthy thing to do"—and personal desires—"I am not really motivated to go."

    Since then readers have suggested two other possible explanations. Pam Brusic has suggested that, ". . . today people are more burdened with personal than societal expectations—'If I want to be a well-informed and cultured person, I ought to go to museums.'—and are more likely to mean lack of ability to organize their personal time sufficiently to attend when they cite 'lack of motivation.' . . . (T)here is an undertone of self-disapproval in a 'lack of motivation' response and . . . to lack motivation is generally thought of as a personal character flaw . . . (T)his alternate explanation . . reflects more on the respondent's attitude toward himself than toward the museum he is not motivated to attend."

    Harold Horowitz has offered a more prosaic explanation. When respondents got to this point in the survey they were asked if they would have liked to have gone to various artistic activities more often. Thinking that the long survey was almost over, they answered "Yes," but they were then asked a series of questions about barriers to attendance for each of the art forms for which they had indicated a desire to attend more often. Not having well-thought-out reasons in mind, they gave a vague reponse that was invariably coded "lack of motivation."

    These three rival explanations illustrate well the difficulty of extracting definitive theories and explanations even from a dataset as complete and as carefully collected as SPPA '85.
18. For a further discussion of these concepts see Feld, O'Hare, and Schuster, *Patrons Despite Themselves,* p. 74; and Michael O'Hare, "The Audience of the Museum of Fine Arts," *Curator,* Vol. 17, no. 2, June 1974, p. 129. Unfortunately, this important distinction is often overlooked; for

example, the otherwise excellent manual, *Surveying Your Arts Audience*, published by the Research Division of the National Endowment for the Arts (Washington, D.C.: National Endowment for the Arts, 1985), is silent on this subject.

19. SPPA '85 used two-part questions to ascertain levels of participation in various artistic activities. The first part asked whether or not the respondent had participated in the activity in the previous year, and the second how often the respondent had actually attended in the previous month. Robinson *et al.* have studied apparent inconsistencies between the answers to these two parts and have concluded that it is most likely that the monthly frequency question overestimates frequency of attendance because respondents "telescope" their previous year's experience into the previous month. (It is still logically possible, however, that respondents underestimate their annual participation.) Robinson *et al.*, *Public Participation in the Arts: Final Report on the 1982 Survey*, pp. 227–233.

    In the analysis of the relative profiles of the museum audience I have used the frequency data to weight respondents' attendance to calculate the distribution of visits. This procedure is valid as long as there is no reason to believe that individuals in one demographic grouping are more likely to overestimate their attendance than individuals in another demographic grouping.

    SPPA '85 was conducted over six months. I weighted each month's respondents by a weight that was the product of how many individuals in the total population each respondent represented (a function of his or her demographic characteristics) times the frequency of attendance by that respondent in the previous month. Adding the six estimates together gave an estimate of the total number of visits to art museums made by the total adult population over those six months. I then multiplied these factors by two to represent one entire year of attendance. In cases where the frequencies were reported in categories—e.g. two to three times in the month—I used the lower bound of the interval to represent the frequency of attendance, using the most conservative assumption in a situation where there is reason to believe that overestimation is common.

    I tested the reasonableness of this procedure by doing a sensitivity analysis, performing a second analysis using the midpoints of the categories (and 8 visits for the 6+ category). The distributions of visits across the various demographic variables changed by only one percentage point in one or two cases. Thus, the percentage distributions are not sensitive to the choice of frequency to represent the categories.

20. Feld, O'Hare, and Schuster, *Patrons Despite Themselves*, pp. 80–83;

also, J. Mark Davidson Schuster, unpublished comparison of results from the Baumol and Bowen audience surveys in the 1960s (William J. Baumol and William G. Bowen, *Performing Arts: The Economic Dilemma*, Cambridge, Mass.: M.I.T. Press 1967, pp. 71–98) with results from the Americans and the Arts surveys of the 1970s (see Note 9).

21. A variety of studies done in Great Britain and France, particularly under the auspices of the Research Division of the French Ministry of Culture, suggest that audience demographics are surprisingly stable across fine art forms, across regions, and over time. Unfortunately, there has been no attempt to bring them together in one place to further explore the resilience of this stability.
22. National Research Center of the Arts, *Museums USA: A Survey Report* (Washington, D.C.: U.S. Government Printing Office, January 1975), pp. xi and 130.
23. Lewis C. Price, Lisa DiRocco, and Janice D. Lewis, *Contractor Report: Museum Program Survey, 1979* (Washington, D.C.: National Center for Education Statistics, March 1981), pp. 52–64. This report is also referred to as the "Museum Universe Survey."
24. National Research Center of the Arts, Inc., *Americans and the Arts* [1984 study], pp. 62 and 65.
25. Wittlin, *Museums*, p. 161.
26. As a starting point see, for example, Marilyn G. Hood, "Getting Started in Audience Research," *Museum News*, Vol. 64, no. 2, February 1986, pp. 25–31; and Research Division, National Endowment for the Arts, *Surveying Your Arts Audience*.
27. This is one of the points stressed in Wittlin's "Twelve-Point Program for Museum Renewal." Wittlin, *Museums*, pp. 212–213.

Appendix
Results from Three Logit Analyses

The text discusses the results of three different logit analyses that were conducted with the SPPA museum attendance data. The actual mathematical results of these three analyses are reported in this appendix.

It may be helpful for the more mathematically inclinded reader to understand that logit analysis is a form of regression analysis in which the "natural logarithm" (logarithm to the base "e"—a mathematical constant equal to 2.7183) of the odds ratio (the probability of attending divided by the probability of not attending) is predicted as a linear combination of the independent variables. In this way, the separate marginal contribution of each of the independent variables to the logarithm of the odds ratio can be calculated as the "coefficient" of each variable. (By comparison, ordinary regression analysis calculates the separate marginal contribution of each independent variable directly to a dependent variable.) The "intercept" is the value of the logarithm of the odds ratio when all of the independent variables are equal to zero. This value is necessary to position the logit curve in the proper place. The probability of attendance at any point on the logit curve can be calculated algebraically from the logit equation.

The results of using logit analysis to predict the probability of attendance from seven independent demographic variables—income, age, race, gender, education level, urbanization, and student status—is reported in Table A. The logit results in Table B predict the probability of attendance from eight independent variables, five of the most important demographic variables plus three variables that measure whether or not the individual had different socialization experiences. And Table C reports the results of a logit analysis that predicts the probability of an individual having unsatisfied demand using the seven original demographic variables.

Table A
Logit Results Predicting the Probability of Attendance

Variable Name	Definition	Coefficient	Significant at .05 Level?
Intercept		–6.075	
Income 2	= 1 if $4,999 < income < $10,000 = 0 otherwise	–0.150	No
Income 3	= 1 if $9,999 < income < $15,000 = 0 otherwise	–0.123	No
Income 4	= 1 if $14,999 < income < $25,000 = 0 otherwise	–0.004	No
Income 5	= 1 if $24,999 < income < $50,000 = 0 otherwise	+0.201	Yes
Income 6	= 1 if $49,999 < income = 0 otherwise	+0.563	Yes
Age	= age in years	–0.004	Yes
Race 2	= 1 if individual is Black = 0 otherwise	–0.815	Yes
Race 3	= 1 if individual is "other" race = 0 otherwise	–0.064	No
Gender	= 1 if female = 0 if male	+0.355	Yes
Educational Level	= number of years of formal education	+0.328	Yes
SMSA 1	= 1 if live in central city of an SMSA = 0 otherwise	+0.689	Yes
SMSA 2	= 1 if live in SMSA but not in central city = 0 otherwise	+0.450	Yes
Student	= 1 if currently a student = 0 otherwise	+0.393	Yes

$R^2 = .16$

Logit Equation:

If, P = Probability of attendance for a particular individual.

Then, Natural logarithm (P/1–P) = – 6.075 – 0.150(Income 2) – 0.123(Income 3) – 0.004(Income 4) + 0.201(Income 5) + 0.563(Income 6) – 0.004(Age) – 0.815(Race 2) – 0.064(Race 3) + 0.355(Gender) + 0.328(Educational Level) + 0.689(SMSA 1) + 0.450(SMSA 2) + 0.393(Student)

Table B
Logit Results Predicting the Probability of Attendance with Socialization Variables

Variable Name	Definition	Coefficient	Significant at .05 Level?
Intercept		–4.137	
Income 2	= 1 if $4,999 < income < $10,000 = 0 otherwise	–0.316	No
Income 3	= 1 if $9,999 < income < $15,000 = 0 otherwise	–0.091	No
Income 4	= 1 if $14,999 < income < $25,000 = 0 otherwise	–0.196	No
Income 5	= 1 if $24,999 < income < $50,000 = 0 otherwise	+0.144	No
Income 6	= 1 if $49,999 < income = 0 otherwise	+0.540	Yes
Age	= age in years	–0.007	Yes
Race 2	= 1 if individual is Black = 0 otherwise	–0.852	Yes
Race 3	= 1 if individual is "other" race = 0 otherwise	–0.177	No
Gender	= 1 if female = 0 if male	–0.008	No
Educational Level	= number of years of formal education	+0.186	Yes
Lessons	= 1 if individual has ever taken visual arts lessons = 0 otherwise	+0.758	No
Appreciation	= 1 if individual has ever taken course in art history or appreciation = 0 otherwise	+0.783	No
Parents 2	= 1 if parents took individual to arts museum occasionally = 0 otherwise	+0.625	Yes
Parents 3	= 1 if parents took individual to arts museum frequently = 0 otherwise	+1.359	Yes

$R^2 = .22$

Logit Equation:

If, P = Probability of attendance for a particular individual.

Then, Natural logarithm (P/1–P) = – 4.137 – 0.316(Income 2) – 0.091(Income 3) – 0.196(Income 4) + 0.144(Income 5) + 0.540(Income 6) – 0.007(Age) – 0.852(Race 2) – 0.177(Race 3) – 0.008(Gender) + 0.186(Educational Level) + 0.758(Lessons) + 0.784(Appreciation) + 0.625(Parents 2) + 1.359(Parents 3)

Table C
Logit Results Predicting the Probability of Having Unsatisfied Demand

Variable Name	Definition	Coefficient	Significant at .05 Level?
Intercept		–2.834	
Income 2	= 1 if $4,999 < income < $10,000 = 0 otherwise	+0.107	No
Income 3	= 1 if $9,999 < income < $15,000 = 0 otherwise	+0.135	No
Income 4	= 1 if $14,999 < income < $25,000 = 0 otherwise	+0.105	No
Income 5	= 1 if $24,999 < income < $50,000 = 0 otherwise	+0.289	Yes
Income 6	= 1 if $49,999 < income = 0 otherwise	+0.312	No
Age	= age in years	–0.007	Yes
Race 2	= 1 if individual is Black = 0 otherwise	–0.339	Yes
Race 3	= 1 if individual is "other" race = 0 otherwise	–0.749	Yes
Gender	= 1 if female = 0 if male	+0.315	Yes
Educational Level	= number of years of formal education	+0.147	Yes
SMSA 1	= 1 if live in central city of an SMSA = 0 otherwise	+0.314	Yes
SMSA 2	= 1 if live in SMSA but not in central city = 0 otherwise	+0.218	No
Student	= 1 if currently a student = 0 otherwise	+0.290	No

$R^2 = .05$

Logit Equation:

If, P = Probability of attendance for a particular individual.

Then, Natural logarithm (P/1–P) = – 2.834 + 0.107(Income 2) + 0.135(Income 3) + 0.105(Income 4) + 0.298(Income 5) + 0.312(Income 6) – 0.007(Age) – 0.339(Race 2) – 0.749(Race 3) + 0.315(Gender) + 0.147(Educational Level) + 0.314(SMSA 1) + 0.218(SMSA 2) + 0.290(Student)

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Other Publications of Interest

Readers of this report may wish to obtain more information about the details of the study and about related research projects conducted for the Research Division of the National Endowment for the Arts. The following reports are available at libraries, bookstores or from their publishers:

Socialization and Participation in the Arts
Richard J. Orend
Research Division Report #21
54 pages
National Endowment for the Arts (1989)
Available from the American Council on the Arts, 1285 Avenue of the Americas, New York, NY 10019

Who Reads Literature?
Nicholas Zill & Marianne Winglee
Research Division Report #22
104 pages, 0-932020-86-0
Seven Locks Press (1990) $9.95

Expanding the Audience for the Performing Arts
Alan R. Andreason
Research Division Report #24
64 pages, 0-929765-01-X
Seven Locks Press (1991) $10.95

In addition the following reports are available through the Education Research Information Center (ERIC) system:

Dan Abreu, "Survey of Public Participation in the Arts, Musical Theater, Operetta, and Opera Attendees." April 1, 1987, ERIC Identification Number: ED 289 760.

Carol Keegan, "Public Participation in Classical Ballet: A Special Analysis of the Ballet Data Collected in the 1982 and 1985 Survey of Public Participation in the Arts." April 30, 1987. ERIC Identification Number: ED 288 756.

David Waterman, "Public Participation in the Arts Via the Media." September 1987, ERIC Identification Number: ED 290 674.

Jerry West, "Public Participation in the Arts: Demands and Barriers." ERIC Identification Number: ED 287 764.

Harold Horowitz, "The American Jazz Audience." ERIC Identification Number: ED 280 757.

John Robinson, et al., "Public Participation in the Arts: Final Report of the 1982 Survey." Survey Research Center, University of Maryland, January 1986. ERIC Identification Number: ED 264 168.

John Robinson, et al., "Survey of Public Participation in the Arts: 1985 Volume I, Project Report." Survey Research Center, University of Maryland, March 1987. ERIC Identification Number: ED 289 763.

Judith R. Blau, "The Geography of Arts Participation: Report on the 1982 and 1985 Surveys of Public Participation in the Arts." March 1987. ERIC Identification Number: ED 289 762.

Paul DiMaggio, "Race, Ethnicity and Participation in the Arts: Patterns of Participation by Black, Hispanic and White Americans in Selected Activities from the 1982 and 1985 Surveys of Public Participation in the Arts." June 1987. ERIC Identification Number: ED 293 759.

J. Mark Davidson Schuster, "An Inquiry into the Geographic Correlates of Government Arts Funding." ERIC Identification Number: ED 298 023.

The documents are the original research reports as prepared by the investigators. They contain extensive information about methods, and numerous tables and figures. The ERIC collection is available at hundreds of libraries in the United States and abroad, as well as "on-line" from computerized information services.

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